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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/785,272

02/24/2004

Ulrich Wantig

71281

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23872

7590

02/22/2006

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EXAMINER

FINEMAN, LEE A

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/785,272

Applicant(s)

WANTIG ET AL

Examiner

Lee Fineman

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/24/04 & 11/29/05 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to an amendment filed 29 November 2005 in which claims 1-20 were amended and claim 21 was added. Claims 1-21 are pending.

#### ***Drawings***

1. The new drawings (figs. 7-10) were received on 29 November 2005. These drawings are acceptable.

#### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 4-6, 8, 14-15, 17, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodland, US 6,269,763 B1 in view of Pratt, US 4,848,886.

Regarding claims 1, 5 and 14, Woodland discloses in figs. 2 and 6 a snorkel device (2.0) for a submarine (fig. 2), wherein the device comprises: an extendible and retractable snorkel tube (2.0, column 8, lines 47-50, note: it includes air intake port 22) and an optical observation means (6), which is a compact unit, connected to the snorkel tube (fig. 6) for above-water observation during submarine travel at periscope depth (see, e.g. fig. 26) and two other compact units (13 and 11) in which one comprises at least one communications means (13) and the other includes an information means (11) including one of a GPS unit and a ESM unit (column 9, lines 41-42), and

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wherein these compact units are provided on the extendible and retractable snorkel tube (figs. 2 and 6) for above-water use during snorkeling travel at periscope depth (see, e.g. fig. 26) of the submarine. Woodland discloses the claimed invention except for wherein the compact unit of optical observation means comprises an optronics unit; and all of the compact units include short-travel drives, which are hydraulic cylinder drives. Pratt teaches a periscope device (1) for a submarine (3) including an optical observation means (39, see fig. 2) connected to the periscope mast/tube (16), wherein the optical observation means is formed as a compact unit (fig. 2) that comprises an optronics unit (in 39, column 3, lines 17-20) and a short-travel drive (10-14) which is a hydraulic cylinder drive (column 3, lines 22-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the optical observation means compact unit in the snorkel device of Woodland with that of Pratt to provide a various (e.g., 360-degree) observation when the submarine is submerged close below the water line (Pratt, column 1, lines 7-10). Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add short travel drives of Pratt to the other compact units of Woodland to provide better operating efficiency and space utilization (Pratt, column 1, line 35) and protection for the compact units.

Regarding claims 2, 4, 6, 8, 15 and 17, Woodland further disclose wherein the compact units (e.g., 6) are provided on an inner or outer side of the snorkel tube (fig. 6); the snorkel tube itself being at least partly designed in a streamlined manner (see fig. 6 and fig. 30).

Regarding claims 20 and 21, Woodland discloses in figs. 2 and 6 a snorkel device (2.0) for a submarine (fig. 2), the device comprising: a movable snorkel tube (2.0, column 8, lines 47-50, note: it includes air intake port 22) movably connected to the submarine (fig. 2 and column 8,

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lines 47-55) and movable away from the submarine (fig. 1 vs. fig. 2); an optical device (6) connected to said snorkel tube (fig. 6); and a communication arrangement (e.g., 13) connected to said snorkel tube (fig. 6), said communication arrangement including an communications unit (13) for above-water communication during snorkeling travel at periscope depth of the submarine (fig. 26). Woodland discloses the claimed invention except for said optical device connected in a retracted position and including an optronics short-travel drive connected to said snorkel tube and an optronics unit for above-water observation during snorkeling travel at periscope depth of the submarine, said optronics short-travel drive moving said optronics unit vertically relative to said snorkel tube to an extended position with said optronics unit arranged beyond an end of said snorkel tube; and the communication arrangement connected in another retracted position and including a communications short-travel drive connected to said snorkel tube, said communications short-travel drive moving said communications unit vertically relative to said snorkel tube to another extended position with said communications unit arranged beyond said end of said snorkel tube. Pratt teaches a periscope device (1) for a submarine (3) including an optical device (39, see fig. 2) connected to the periscope tube (16) in a retracted position (fig. 1), said optical device including an optronics short-travel drive (10-14) connected to said periscope tube (16) and an optronics unit (in 39, column 3, lines 17-20) for above-water observation during snorkeling travel at periscope depth of the submarine (Pratt, column 1, lines 7-10), said optronics short-travel drive moving said optronics unit vertically relative to said periscope tube to an extended position with said optronics unit arranged beyond an end of said snorkel tube (column 3, lines 22-30) from a retracted position within the periscope tube (fig. 1). It would have been obvious to one of ordinary skill in the art at the time the invention was made

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to replace the optical unit in the snorkel device of Woodland with that of Pratt to provide a various (e.g., 360-degree) observation when the submarine is submerged close below the water line (Pratt, column 1, lines 7-10). Further, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add short travel drives of Pratt to the other compact units of Woodland to provide better operating efficiency and space utilization (Pratt, column 1, line 35) and protection for the compact units. Therefore, said communications short-travel drive will move said communications unit relative to said snorkel tube to another extend position with said communications unit arranged beyond said end of said snorkel tube from a retracted position within the snorkel tube.

4. Claims 3, 7, 9-13, 16 and 18-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Woodland in view of Pratt as applied to claims 1, 2, 4, 5 and 17 above, and further in view of Wäntig et al., DE 3637618 A1.

Regarding claims 3 and 7, Woodland in view of Pratt as applied to claim 2, disclose wherein some compact units (see 6, left side of fig. 6) are provided on the outside of the snorkel tube. However Woodland in view of Pratt as applied to claim 2 do not disclose a common, streamlined casing is arranged around the snorkel tube and the compact units. Wäntig et al. teach in figs. 1-4, a compact unit (antenna) provided on the outside of the snorkel tube (abstract); a common, streamlined casing (1) is arranged around the snorkel tube and the compact units. It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a streamlined casing around the outside units as suggested by Wäntig et al. to provide a more aerodynamic structure.

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Regarding claims 9-13, 16 and 18-19, Woodland in view of Pratt as applied to claims 1, 2, 4, 5 and 17 above and Woodland in view of Pratt and Wöntig et al. as applied to claims 3 and 7 above disclose the claimed invention except for explicitly stating wherein the communication means includes a radio unit for HF, VHF, UHF or UHF-satcom radio communication or a combination thereof. Wöntig et al. further teach use of a UHF or VHF radio (Derwent abstract USE/ADVANTAGE). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the communication unit be a radio unit for UHF or VHF as suggested by Wöntig et al. as it is a reliable, commonly available radio unit.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

6. It is noted by the Examiner that the drawing, specification and claim objections made in the previous Office Action have been withdrawn due to amendment by the Applicant.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Lake, US 726,947; Helmore, US 2,413,350; and Ferguson et al., US 4,611,551 disclose snorkel tubes on submersibles.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Fineman whose telephone number is (571) 272-2313. The examiner can normally be reached on Monday - Friday 7:30 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



LAF

February 15, 2006

  
MARK A. ROBINSON  
PRIMARY EXAMINER